

**ABSTRACT**

A method for generating electronic keys from two integer numbers a, b, includes the step of verifying that the numbers are prime relative to each other. This verification step comprises the operations of calculating the modular 5 exponentiation  $a^{\lambda} \text{mod } b$ , where  $\lambda$  is the Carmichael function, verifying that this modular exponentiation is equal to 1, storing the pair a, b when equality is verified, and reiterating the procedure with another pair when there is no verification. The invention applies to chip cards with a microprocessor having an arithmetic processor.